

List of Current Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 17 (Cancelled).

18. (Currently amended) A method for transmitting measured values between two measurement transmitters, which transmit, via two communication connections, digital signals according to the master/slave principle and analog signals to a control system, which serves as master, comprising the steps of:

transmitting digital signals between the two measurement transmitters via the two
~~an additional communication connection~~ connections; and

providing an additional communication connection for the transmission of the
digital signals between the two communication connections; and

examining, using the receiver measurement transmitter, incoming digital signals for at least one characteristic value of the transmitting measurement transmitter, in order to find measured values needed for evaluation in the receiver measurement transmitter.

19. (Previously presented) The method as claimed in claim 18, wherein:
communication between the measurement transmitters and the control system occurs according to the HART®-standard.

20. (Previously presented) The method as claimed in claim 18, wherein:
the receiver measurement transmitter evaluates the units characterizing number associated with a given numerical value; and
the meaning of the units characterizing number is established in the HART®-standard.

21. (Previously presented) The method as claimed in claim 18, wherein:
the transmitting measurement transmitter is placed in the HART® burst
mode, for transmitting its measured values in regular intervals.

22. (Previously presented) The method as claimed in claim 18, wherein:
the receiver measurement transmitter is operated in master mode and reads
the measured values out of the transmitting measurement transmitter.

23. (Previously presented) The method as claimed in claim 18, wherein:
the receiver measurement transmitter and the transmitting measurement
transmitter register different measured variables.

24. (Previously presented) The method as claimed in claim 23, wherein:
the receiver measurement transmitter, a computer unit is installed with an
evaluation program, which determines from the different measured variables a
derived measurement variable.

25. (Previously presented) The method as claimed in claim 23, wherein:
the receiver measurement transmitter is a vortex measuring device and the
transmitting measurement transmitter is a pressure measuring device, which
determine, respectively, flow velocity and pressure in a medium.

26. (Previously presented) The method as claimed in claim 25, wherein:
installed in the vortex measuring device is a flow computing unit, which
determines, from the pressure value and flow velocity of the medium, a derived,
measured variable.

27. (Previously presented) The method as claimed in claim 25, wherein:
the vortex measuring device contains an additional, installed, temperature
sensor.

28. (Previously presented) The method as claimed in claim 27, wherein:
installed in the vortex measuring device is a flow computing unit, which
determines from the flow velocity of the medium, the temperature value and the
pressure, a derived, measured variable (e.g. heat flux value or mass flow value).

29. (Previously presented) The method as claimed in claim 23, wherein:
the receiver measurement transmitter is a vortex measuring device with an
installed, additional, temperature sensor, and the transmitting measurement
transmitter is a temperature measuring device.

30. (Previously presented) The method as claimed in claim 29, wherein:
in the measuring device, a flow computing unit is installed, which determines
from the flow velocity of the medium, the temperature value of the temperature
sensor of the vortex measuring device and the temperature value of the temperature
measuring device, a derived, measured variable (e.g. energy drain).

31. (Previously presented) The method as
claimed in claim 23, wherein:
the receiver measurement transmitter is a vortex measuring device and the
transmitting measurement transmitter is a temperature measuring device, which
determine, respectively, flow velocity and temperature in a medium.

32. (Previously presented) The method as claimed in claim 31, wherein:
in the vortex measuring device, a flow computing unit is installed, which
determines from the flow velocity of the medium and the temperature, a derived,
measured variable (e.g. heat flux value or mass flow value, for liquids or saturated
steam).

33. (Previously presented) The method as claimed in claim 18, wherein:
the receiver measurement transmitter accepts and evaluates signals from
more than one transmitting measurement transmitter.

34. (Previously presented) The method as claimed in claim 25, wherein:
the receiver measurement transmitter is a Coriolis flow measuring device, an
ultrasonic flow measuring device or a magneto-inductively or thermally working, flow
measuring device.